Steps to take in Scheduling Students in SIS2000+

Introduction: The State Office of Education has prepared this document to assist registrars and those concerned with developing the school master schedule, entering student requests and setting up and running the SIS2000+ loader. For detailed information, refer to the SIS2000+ webdocs or the SIS2000+ Preparing for Scheduling Training document.

1. **Some of the scheduling process has already been completed.** As you are aware, producing student schedules for next year requires some setup prior to being able to run the loader, which is the SIS2000+ process for scheduling students. At this point in time, we have run for you the new year initialization process, which has created a track for the new year, copied the previous year's master schedule, faculty records, promoted students to the new grade and new school, copied the courses you are offering this year into the new track and have now reached the point where it is possible to enter student course requests for next year in the new track.

2. Some of the data needs to be verified to see that it is correct:

a. District course information needs to be correct. We have discovered that it is not possible to modify the course numbers and if you change the course descriptions, it changes them for this years course as well. We are working on this to only apply the course descriptions to the new track. This information is entered in the System menu under District Courses. New courses and course descriptions can be added. Some of the course information can be edited if it is incorrect.

b. At some point the new year track and calendar information will have to be entered. Currently part of this year's configuration appears in the track information. The remainder of the information will need to be added.

c. Faculty information needs to be verified. Any new or proposed faculty changes need to be reflected in the faculty information for the new track. Faculty members, who are not returning, need to be made inactive in the future track. Their status can also be deleted in the future track. New faculty members can be added as "Staff" or some other designation until their actual identity is known.

d. Student information for the future track should already appear in the student enrollment module. This information needs to be verified and will need to be updated throughout the year, when contacts, addresses, etc., for students change. In order to verify that the students are appearing, click on the "rainbow" which will give you a listing of the future students.

2. **When the system, student and faculty information has been verified some set up is required in the scheduling module.** As a general rule, starting with the module in the upper left hand corner and moving from left to right, you will be able to update all the necessary information.

a. District courses need to be assigned to the track. This occurs in the **course selection module.** When the course selection module is opened the # of sections column needs

to be set for the actual number of sections of a class. This information is obtained once the course requests have been entered and the Course List and Tally Report has been run. This will give information regarding the number of students who have signed up for a particular course.

b. Course requests can be assigned using the **career plan module**. This can be done by organizing the courses for a variety of career plans as developed through the SEOP process. The career plan module can also be used to enter the course requests for required courses for specific grades or other special circumstances. Course requests are then generated and will appear in the course requests module.

c. Course requests can be entered using the SIS2000+ course request module or the Rapid Requests Module. The SIS2000+ course requests module must be used if there are special circumstances such as assigning a specific faculty member to the course requested by the student. The Rapid Requests Module allows rapid entry of all class requests where there is no need for a specific faculty assignment. In the 48x release the T/A problem has been fixed. After the course requests have been entered run the Course Request List and Tally Report (do not check detail listing on). This information is used by the individual school to update or create the proper number of courses and sections in the master schedule. Leave priority set to 1. Also enter this information on the course selection module.

d. **Classroom information** must be entered in the classroom editor including capacities for the various classrooms.

e. While there is a **master schedule** currently in the future track, there may be a necessity to modify it to accommodate the circumstances for the new year. Most understand how to add and delete classes from the master schedule. A class can be moved to another faculty member by clicking on the class in the master schedule and entering another faculty member's name. How well the master schedule is constructed, given the nature of student requests can be determined by running the conflict matrix report. This report lists the number of potential and actual conflicts between classes and the number of those conflicts. This report has been updated and should prove very helpful in analyzing and modifying the master schedule to get the best possible loader run. It is important to remember that not all master schedule conflicts can be resolved because of the scarcity of resources, but this report should be analyzed carefully to see if the master schedule needs to be adjusted.

f. **Faculty teams** need to be designated if you plan to have faculty teams which share the same students. If students are assigned to teams, team descriptions needed to be added. Team designations are added to the course requests along with the courses taught by the team. Section linking is used to associate master schedule course sections with one another. The use of this module is not necessary if the master schedule is set up properly. (See handout or SIS2000+ webdocs, if applicable)

g. **Loader rules** need to be defined. These are the rules which designate which courses are to be scheduled before other classes. For example, Algebra 1a must be scheduled prior to Algebra 1b. Algebra 1a must not be scheduled in the same term as 1b. This is particularly significant in trimester

schools where it is possible in the master schedule to have Algebra 1a and 1b, for example, taught during the same trimester. It would not be desirable for the student to be scheduled for 1a and 1b during the same trimester.

h. Loader options need to be set. The loader button is clicked and loader options selected. The default options are displayed. We have found that, currently, the loader options need to be set in the following way. Under the Standard Options section, Use Global Rules, Use Course Load Balancing, Use Teacher Preferences, and Use Team Preferences need to be checked on. The rest will be checked off. When using Course Load Balancing, another menu will appear which allows the selection of gender, ethnicity, etc., for example. Under Advanced Options, Set Overfill Percentage needs to be set to around 10%, Time Limit (Hours) needs to be set to 5 and Maximum Patterns needs to be set to 10000. Optional Constraint Priorities defaults need to be verified. Minimize Alternates is set to 1 (In subsequent runs of the loader, this option is set to 0), Soft Course Rules is set to 2, Soft Load Balance is set to 3, Teacher Preference is set to 4, and Term Preference is set to 5. The Rescheduling button is clicked on. This option allows student schedules to be rescheduled in a variety of configurations, including pulling existing students, which may be more difficult to schedule, out of a class and rescheduling another student. .

i. Load Prior to running the loader, please call us at USOE*. There is a constraint that needs to be removed from your database, so the loader will be run properly. There is a new report in version 47a. It is the Loader Checklist and Verification Report. This is required to be run before the loader is started. When this report is run, it gives you a printout of any errors it finds. Print the report. It is important to review this report and make the necessary corrections. Once the setup is complete, click on Load. The loader will begin to schedule students into classes. For the first run and some of the following loader runs, leave the students to load option set to all students. It is helpful to have all students scheduled so the reports will reflect any problems in the master schedule which can be corrected so that the percentage of scheduled students can be increased in subsequent loader runs. (*In the database tables, there is a table called stureq. Double click on table and the manage table screen appears. Click on the advanced features (green plus). Click constraints tab. Click on the drop down tab. The constraint is stureq_reqstatc. Click on it and remove it. USOE will be looking at the various databases and correcting this problem. You know that this table is still operational when you do a loader run and after completing it you get an error message.)

j. Reports It is important to run the necessary reports to evaluate how successful the loader run was. These reports are found by clicking on the last button, Reports, in the scheduling module. These include the Master Schedule Report, Unscheduled Student Report, Student Analysis Report and Summary of Loader Results. In a recent loader run at a Utah High School, 97% of the students received a full schedule. Of the remaining students, who did not receive a full schedule, a review of the report revealed the following problems which could easily be corrected. Most were singleton classes with only a few students in each which could not be scheduled. In some cases the capacity of the classes was not set high enough. This was corrected by simply increasing the capacity of those classes. In many of the situations, there was a conflict between AP or other singleton classes which could not be resolved. In

those cases, the students will simply have to make a choice, which of the classes they want to have. In some instances, one could attempt to modify the master schedule by moving some of the singleton classes to other hours of the day. This, of course, might create other scheduling conflicts. When the necessary modifications to the master schedule are made, the loader may be rerun with all students still set on. When there are students scheduled for a class, you cannot move it in the master schedule. It may be necessary to call us at USOE and have us delete the scheduled student requests so you can make the necessary changes to the master schedule. This process is repeated until you are satisfied. The student schedules are then printed and handed out to the students. The timetable for this varies depending upon the preferences of the school.